

Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: Joshua J. Higgins

GENERAL INFORMATION:

Name:	Calgon Carbon Corporation
Address:	U.S. Route 23 S., Catlettsburg, Kentucky
Date application received:	February 17, 2005
SIC/Source description:	2819, Industrial Inorganic Chemicals not Elsewhere Classified
Source ID #:	21-019-00014
Source A.I. #:	315
Activity #:	APE20050001
Permit number:	V-06-020

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input type="checkbox"/> Permit modification	<input type="checkbox"/> Conditional major
__Administrative	<input checked="" type="checkbox"/> Title V
__Minor	<input checked="" type="checkbox"/> Synthetic minor
__Significant	<input type="checkbox"/> Operating
<input checked="" type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input checked="" type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

☐ Acid rain source
☐ Source subject to 112(r)
☒ Source applied for federally enforceable emissions cap
☐ Source provided terms for alternative operating scenarios
☐ Source subject to a MACT standard
☐ Source requested case-by-case 112(g) or (j) determination
☐ Application proposes new control technology
☒ Certified by responsible official
☒ Diagrams or drawings included
☐ Confidential business information (CBI) submitted in application
☐ Pollution Prevention Measures
☒ Area is non-attainment (list pollutants): SO₂ (South of the 4251 km Northing Line)
Ozone (8-hr standard), and PM_{2.5}
(According to 40 CFR 81.318)

EMISSIONS SUMMARY:

Pollutant	Actual (tpy) (from 2005 Inventory)	Potential (tpy)
PM/PM ₁₀	126.049	871.875
SO ₂	95.880	465.900
NO _x	104.078	447.605
CO	24.754	210.632
VOC	2.567	24.300
LEAD	0.000	11.301
Single HAPs HCl HF	1.933 0.579	4.249 2.190
Source wide HAPs	2.512	6.439

SOURCE DESCRIPTION:

Calgon Carbon Corporation operates a primary activated carbon and recycle carbon regeneration plant in Catlettsburg, Kentucky. Activated carbon is produced from high-grade bituminous coal. Coal is received and stored in silos, ground to fine powder, mixed with pitch, and pelletized to form a briquette. This briquette is crushed and screened and the carbon is baked to remove volatiles in kilns. After baking the carbon is 'activated' in furnaces. The activated carbon is then cooled and transferred to screening and packaging operations. The plant also produces several specialty products including acid washed carbon, fine carbon, and impregnated carbon products.

Fine carbon is produced using a roll mill and screens while the acid-washed carbon is produced by washing sized carbon with a hydrogen chloride solution. This process removes ash and iron making the carbon suitable for food-grade applications. Residual acid from the process is neutralized with soda ash and the carbon is dried in a direct-fired kiln.

The carbon regeneration plant received spent carbon from end-users of activated carbon and desorbs the adsorbed materials, thereby regenerating the carbon for reuse. This plant consists of spent carbon storage vessels, washers to remove sand, dewatering steps, and a nine-hearth reactivation furnace. The top two hearths of the furnace serve as an afterburner that discharges into a spray dryer scrubber. Sodium carbonate is used in the spray dryer to remove acidic gases, primarily hydrogen chloride and sulfur dioxide. Final particle collection is performed by a fabric filter.

Calgon operated previously under the following Title V permits: V-00-015 issued August 21, 2000; V-00-015, Revision 1 issued July 10, 2003; and V-00-015, Revision 2 issued March 1, 2004.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

Numerous emission and operating limitations are carried over into this renewal permit based on previous Synthetic Minor determinations, and on voluntary limits taken based on 401 KAR 53:005 in order to help obtain the National Ambient Air Quality Standards (NAAQS). See the Statement of Basis and Section B of the permit for specific details.

OPERATIONAL FLEXIBILITY: None.